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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,509	01/05/2006	Tomohiro Uryu	MAT-8791US	8639

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EXAMINER	
WILLIS, RANDAL L	
ART UNIT	PAPER NUMBER
2629	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/563,509	URYU ET AL.	
	Examiner	Art Unit	
	RANDAL WILLIS	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 June 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to application No. 10/563509 filed 1/05/2006. Claims 1-6 are currently pending and have been examined.

Response to Arguments

2. Applicant's arguments filed June 29th 2010 have been fully considered.
    a. Examiner withdraws the 112 rejection based on the fact the reduced data size is based on the vertical blanking period, and since the period is fixed size, the data size would be as well.
    b. Applicant argues that one of ordinary skill in the art would not combine the teachings of Black with Miura as it increases the complexity of the receiver. However, the combination of Black and Miura is valid, in that the teachings of Black do not interfere with the reference of Miura, only modifies the size of data sent at once. One of ordinary skill in the art at the time of the invention would realize that using universal sized data transmissions as taught by Black would yield predictable results in the allowing information to be transmitted to the display.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6 are rejected 35 U.S.C. 103(a) as obvious over Miura (WO03044766 in which US2004/0263496 will be used as an English translation) in view of Fumoto (5200738) and "What is Asynchronous Transfer Mode" by Ken Black.

Apropos claim 1, Miura teaches:

An image signal processing device comprising:

a semiconductor integrated circuit (42, Fig. 3) having:

a video signal processing unit for outputting video output data to a display device in a plurality of fields (Image controller 42b, Fig. 3); and

a control unit for holding data for controlling an operation of the video signal processing unit (42a holds data for the image controller, Fig. 3); and

an external memory (41, Fig. 3) that is disposed outside the semiconductor integrated circuit, holds control data to be fed to the control unit ([0049]) and allows data read to be controlled by the control unit,

wherein data transferred between the external memory and the control unit has data that must be updated in every field of the plurality of fields and data that does not need to be updated in every field of the plurality of fields(Data held is dynamic which is updated and static which is not, [0050] and [0051]), and

the data that does not need to be updated in every field is divided into a plurality of reduced size data, the plurality of reduced size data assigned to the plurality of fields respectively, and transferred (See Fig. 4b, static control data divided into fields such as 15a-c).

However, Miura doesn't explicitly teach:

The data is transferred in a vertical blanking time period of the video output data

And the reduced size data having a common size corresponding to a length of the vertical blanking time period.

In the same field of transferring data within display devices, Fumoto teaches transferring data to the display from an external memory during the vertical blanking period of the display device (Col 4 lines 30-40).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the data transfer of Miura occur during the vertical blanking period as taught by Fumoto in order to not disrupt the displaying of the image on the

display device, this would have the obvious consequence of the data to be sent must be divided into small enough segments to be sent in each vertical blanking period.

Further Black teaches a method of transferring data where the data is divided into a plurality of cells, each cell being the same bit length in order to create a very efficient way to transfer video data and speed up the data transmission.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to ensure that the reduced sized data of Miura was reduced to a fixed data length as taught by Black so that less resources need to be used to denote the beginning and ending of the data sent and thus speed up the data transmission.

Apropos claim 2, Miura teaches:

The image signal processing device according to claim 1, wherein the video signal processing unit has a memory for holding the data that must be updated every field and a memory for holding the data that does not need to be updated every field (Dynamic and Static control data both delivered to 42, See Fig. 3 and [0071]).

Apropos claim 3, Miura and Fumoto teaches:

Wherein the data is divided into the plurality of reduced size data to ensure that each one of the plurality of data can be transferred between the external memory and the control unit, respectively during successive vertical blanking periods (Miura's teaching of dividing the data into a plurality of frames combined with Fumoto's teaching of using the vertical blanking period to transfer the data would inherently have to insure

that data sent during a vertical blanking period was short enough to be successfully sent during the time required).

Apropos claim 4, Miura teaches:

An image signal processing device for a display device performing a display according to a subfield driving method comprising:

a semiconductor integrated circuit having:

a video signal processing unit for outputting video output data to the display device in a plurality of fields (Image controller 42b, Fig. 3);

a control unit for holding data for controlling an operation of the video signal processing unit (42a holds data for the image controller, Fig. 3);

an external memory (41, Fig. 3) that is disposed outside the semiconductor integrated circuit, holds control data to be fed to the control unit ([0049]) and allows data read to be controlled by the control unit,

wherein the video signal processing unit includes:

an image quality correcting circuit for signal processing to correct image quality of video signal data input in the video signal processing unit (42ba, Fig 8)

a subfield converting circuit (42bb, Fig. 8) for generating a signal for every subfield of the plurality of fields based on output data from the image quality correcting circuit,

a first memory for holding data, that must be updated in every field of the plurality of fields, required by the image quality correcting circuit (42a receives dynamic control data from 41a, Fig. 8), and

a second memory for holding data, that does not need to be updated in every field of the plurality of fields, required by the subfield converting circuit (44a receives static control data from 41b, Fig. 8),

wherein the semiconductor integrated circuit has a plurality of terminals and at least two of the plurality of terminals are used for both outputting the video output data output from the video signal processing unit and transferring data between the external memory and the control unit (See connections in Fig. 8 showing both connections to the memory banks, and video data output), and

the data transferred between the external memory and the control unit has data that must be updated in every field of the plurality of fields and data that does not need to be updated in every field of the plurality of fields(Data held is dynamic which is updated and static which is not, [0050] and [0051]), and

data stored in the external memory in the vertical blanking time period are acquired into the second memory for holding the data required by the subfield converting circuit in every field and an operation of the subfield converting circuit is controlled based on the data ([0063] and [0069] and [0074])

the data that does not need to be updated in every field is divided into a plurality of reduced size data, the plurality of reduced size data assigned to the plurality of fields

respectively, and transferred (See Fig. 4b, static control data divided into fields such as 15a-c).

However, Miura fails to explicitly teach:

data stored in the external memory can be ROM data

The data is transferred in a vertical blanking time period of the video output data

In the same field of transferring data within display devices, Fumoto teaches transferring data to the display from an external memory during the vertical blanking period of the display device (Col 4 lines 30-40)

The data that does not need to be updated in every field is divided into a plurality of data having a common size corresponding to a length of the vertical blanking time period.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the data transfer of Miura occur during the vertical blanking period as taught by Fumoto in order to not disrupt the displaying of the image on the display device.

Further Black teaches a method of transferring data where the data is divided into a plurality of cells, each cell being the same bit length in order to create a very efficient way to transfer video data and speed up the data transmission (Paragraph 3).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to ensure that the reduced sized data of Miura was reduced to a fixed data length as taught by Black so that less resources need to be used to denote the beginning and ending of the data sent and thus speed up the data transmission.

Further, Examiner takes official notice that the use of ROM and RAM in display devices is well known to one of ordinary skill in the art at the time of the invention, and therefore the use of ROM data for data that doesn't need to be changed in the memory of Miura would have been obvious to one of ordinary skill in the art at the time of the invention in order to prevent accidental erasure of important data.

Apropos claim 5, Miura teaches:

Wherein a line for outputting the video output data is connected with a line for outputting the data output from the external memory (VD2 is connected through the image control 42 to the outputs of 41, which are the data output from the external memory, Fig. 3).

Apropos claim 6, Miura and Fumoto teach:

Wherein the data that does not need to be updated in every field is divided into a plurality of reduced size data ([0087]) corresponding to a length of the vertical blanking time period (Fumoto teaches transferring data in vertical blanking period Col 4 lines 30-40, thus the size of the data frames of Miura would inherently have to be small enough to transmit during the vertical blanking period), the plurality of reduced size data assigned to the plurality of fields respectively, and transferred.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RANDAL WILLIS whose telephone number is (571)270-1461. The examiner can normally be reached on Monday to Thursday, 8am to 5pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on 571-272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RLW

/Amr Awad/
Supervisory Patent Examiner, Art Unit 2629